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U.S. Children's Bureau

Emergency food relief and
child health

Washington

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EMERGENCY FOOD RELIEF AND CHILD HEALTH

FOR EVERY CHILD
EVERY DAY

At least

ONE PINT OF MILK
(He *should* have 1½ to 2 pints)

TWO TEASPOONFULS OF
COD-LIVER OIL IF HE IS LESS THAN
2 YEARS OLD
(He *should* have 3 to 4 teaspoonfuls)

ONE VEGETABLE OR FRUIT
(He *should* have three or four)

And also

PLENTY OF BREAD, CEREALS
AND OTHER ENERGY
AND BODY-BUILDING FOODS

UNITED STATES DEPARTMENT OF LABOR
CHILDREN'S BUREAU
AND
UNITED STATES
DEPARTMENT OF AGRICULTURE
BUREAU OF HOME ECONOMICS

308

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Box 349

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(II)

EMERGENCY FOOD RELIEF AND CHILD HEALTH

The food needs of growing children present the most important of all the problems to be met in planning relief budgets. Growth increases the demand not only upon the quantity of food but also upon the quality. Growth also hastens the ill effects of an inadequate diet. Certain specific inadequacies in diet result in deficiency diseases such as rickets, scurvy, and pellagra. But the results of prolonged general underfeeding—commonly known as "general malnutrition"—while they may be less dramatic and more easily overlooked, are not less serious. In time of economic stress children may suffer both types of damage unless the diet is carefully safeguarded.

The standard of *all* relief should be such as to provide a fully adequate diet, which allows variety and an ample margin of safety in all the nutritive essentials, and every effort to maintain such a standard should be made even under emergency conditions. In order to provide the foods necessary for health and growth this diet must contain, first of all, the protective foods—milk, cod-liver oil (for young children), vegetables, and fruit. These provide safeguards to health and growth not found to a sufficient extent in other foods. In addition, an adequate diet must include certain other foods—those which supply energy (breads, cereals, sugars, fats) and those which supply additional body-building substances (cereals, legumes, eggs, cheese, meat or fish). It may be emphasized that no amount of these other foods will take the place of the protective foods. Children, because of the demands of growth, and pregnant and nursing mothers also, need these protective foods more than do others in the family. Deficiency diseases are inevitable if the supply of protective foods is insufficient.

If, under widespread conditions of economic stress such as many communities are facing to-day, family diets are forced below the accepted standards of adequacy that provide the margin of safety necessary for long-continued use, they must not be allowed to fall to the point at which health and the growth of children will suffer. It is imperative that allowances for food be such that the protective foods—milk, cod-liver oil, vegetables—and the other foods can be provided in at least certain irreducible amounts, amounts below which diets can not fall without resulting in nutritional disease or stunting of growth. When planning food relief under emergency conditions, it is especially necessary that advice be given to families to help them select foods wisely and apportion their funds so as to insure at least the irreducible amounts of the protective foods.

The following suggestions regarding the protective and other foods are given to help those who are administering relief and advising families about the selection of food. Special emphasis should be laid on the needs of children for the protective foods, since they, more than adults, will suffer from inadequacies in this part of the diet.

PROTECTIVE FOODS

Milk.—Whole milk (unskimmed) should be the foundation of every diet. It is imperative in the diet of every child throughout the whole period of growth and in the diet of every pregnant and nursing mother. In every food-relief plan effort should be made to allow enough money to provide $1\frac{1}{2}$ pints to 1 quart of milk daily for every child and every pregnant or nursing mother and half this amount for each other adult. When, however, in budgeting emergency relief, funds are so limited that this is not possible, *at least one pint* for every child and every pregnant or nursing mother must be provided daily. Under these conditions each other adult in the family should also be allowed some milk—at least one cup daily. For the baby who must be fed artificially the full amount of milk required in his daily formula should always be allowed. Though milk may seem to be an expensive food, money spent for milk will bring a better return in food value than money spent for any other food.

Evaporated milk (not sweetened condensed) is whole milk, evaporated to half its original bulk. It may very well be used as an alternative for fresh milk. A "tall can" of evaporated milk when diluted with an equal amount of water is the equivalent of a quart of fresh milk. In most communities evaporated milk is cheaper than fresh milk, especially when bought in quantity. If evaporated milk is cheaper than fresh milk it should be used for at least half, if not for all, of the family milk supply when the amount of money for food is limited. Evaporated milk is especially well adapted to the feeding of infants. Milk products, such as cheese and dry skim milk, may be used to increase the milk solids in the diets, especially of adults. Skim milk, either fresh or dry, may be used provided either butter or cod-liver oil is a regular part of the daily diet.

Cod-liver oil.—Cod-liver oil is not a "luxury" but an indispensable food for young children. It not only will prevent rickets but also will protect the child in other important respects. Cod-liver oil should be included in the diet of all children under 2 years of age, and it may well be given to all young children, especially when malnutrition is present. Under conditions of economic stress, when overcrowding and other bad hygienic conditions may exist and when diets are limited in the amount of milk, eggs, fruit, and vegetables, there is even greater need for cod-liver oil. It is of the greatest importance that the oil purchased should be of a good grade as shown by tests for vitamins A and D. To provide 3 to 4 teaspoonfuls a day of such a grade of cod-liver oil for a child will cost about 15 to 25 cents for a week's supply. When funds are limited, at least 2 teaspoonfuls should be given daily.

Vegetables or fruits.—At least three or four vegetables and one fruit daily are usually considered advisable in an adequate diet for children or adults. In emergency-relief planning, however, it is not always possible to provide vegetables or fruit to this extent or variety. Diets for both children and adults can and must be planned to include at least one vegetable or fruit daily (preferably two) in order to provide minerals and vitamins. In both these respects vegetables give better returns for the money than fruits.

When only one vegetable can be served daily it is desirable to use as often as possible the vegetables which can be eaten raw or which need only a few minutes for cooking. Cabbage and tomatoes (raw or canned) are inexpensive foods which can be eaten this way and each should be used at least twice a week. It is important that at least part of the cabbage be eaten raw and that the canned tomatoes be heated a few minutes only. Some of the strained tomato juice should be saved for the baby so that he may be given at least 2 tablespoonfuls a day. Spinach and other greens, onions, and carrots (chopped or ground) also may be eaten raw.

Potatoes should be used as liberally as possible but not to the exclusion of the other vegetables.

OTHER FOODS IN THE FAMILY DIET

Energy foods.—Bread and cereals (including corn meal, hominy, oatmeal, flour, rice, macaroni), legumes (dried peas, beans, peanuts), sugars (sugar, molasses, sorgo sirups, corn sirup), and fats and oils (butter, margarine, lard, salt pork, vegetable oil) provide fuel for the body's energy needs and should make up a large portion of the family food. Bread, cereals, beans, and peas contain also body-building material in very cheap form; combined with milk they become even more valuable. The whole-grain breads and cereals contain in addition certain important substances usually removed in milling and should be used once a day in low-cost diets. Cane molasses and sorgo sirups (sorghum) contain minerals not found in refined sugars or sugar sirups.

Fats, such as butter, margarine, lard, salt pork, and vegetable oil, are important sources of energy. Fats make more palatable the large quantity of grain foods necessary in low-cost diets and are a great aid in cookery.

Other body-building foods.—Eggs, cheese, lean meat, and fish supply protein and certain vitamins and minerals. On a very limited budget meat and fish may be reduced to very small amounts. Lean meat, liver, and fish have pellagra-preventing value and in this respect are like milk. Eggs are very valuable as food and should be included in the diet, especially for children, whenever possible.

THE FOOD BUDGET

Adequate Diets at Minimum Cost

In *all* relief the food budget should be such as to provide a diet adequate to maintain health and growth, one which allows some variety and an ample margin of safety in all nutritive essentials and is therefore safe for use over an indefinite period of time. The cost will vary with the size of the family, with local market prices, with the skill used in selecting and preparing the cheaper forms of food, and with the family's own resources in dairy, garden, or other produce.

It is estimated that for a family of five (father, mother, and three children) \$7.50 to \$10 a week should be allowed to provide an adequate diet at minimum cost.¹ A special allowance, from 15 to 25 cents a week, must be added to the food budget to provide cod-liver oil in those families where there is a child under 2 or other children who are not well nourished. So also must additional allowance be made to provide special diets when there is illness such as tuberculosis in the family.

The accompanying weekly market orders for food for families of three, five, and seven persons will provide adequate diets at minimum cost. They allow some variety and the margin of safety which will permit their use over an indefinite period of time. Market orders for families of other sizes may be interpolated between those given.

¹ The diets suggested in U. S. Department of Agriculture Miscellaneous Publication No. 113, *Adequate Diets for Families with Limited Incomes* (April, 1931), cost, at present city retail prices, from \$7.50 to \$10 a week for a family of five. The grocery orders for families of five used by the New York Association for Improving the Condition of the Poor cost \$7.75 to \$10 a week. Food allowances reported from California vary from \$9.21 to \$9.77 a week for a family of five. The Chicago Standard Food Budget at recent prices averages \$10 a week for a family of five.

Weekly Market Order to Provide Adequate Diet at Minimum Cost for Families with Children

Milk—

	Three in family	Five in family	Seven in family
Half fresh, half evaporated (not sweetened condensed).....	10½ qts.	21 qts.	28 qts.

Vegetables—

Tomatoes, No. 2 cans.....	3 cans.....	5 cans.....	7 cans.
Leafy vegetables (cabbage, greens).....	3 lbs.....	5 lbs.....	7 lbs.
Potatoes ¹	7½ lbs.....	15 lbs.....	20 lbs.
Other vegetables or fruit.....	9 lbs.....	11 lbs.....	13 lbs.

Bread, cereals, and legumes—

Bread (part whole wheat)...	10 lbs.....	14 lbs.....	18 lbs.
Cereals (oatmeal, wheat cereal, rice, macaroni).....	3 lbs.....	5 lbs.....	7 lbs.
Flour and corn meal.....	3 lbs.....	4 lbs.....	5 lbs.
Dried beans and peas.....	1 lb.....	1½ lbs.....	2 lbs.

Fats—

Butter, margarine, lard, salt pork, vegetable oil...	2 lbs.....	3 lbs.....	4 lbs.
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Sugars—

Cane molasses, sorgo sirups.	½ pt.....	1 pt.....	1 pt.
Sugars.....	2 lbs.....	3 lbs.....	5 lbs.

Other foods—

Cheese.....	¼ lb.....	½ lb.....	¾ lb.
Eggs.....	½ doz.....	1 doz.....	1 doz.
Lean meat or fish.....	Not more than 4 lbs.	Not more than 6 lbs.	Not more than 8 lbs.

Accessory articles—

Coffee.....	½ lb.....	¾ lb.....	1 lb.
Tea.....	½ lb.....	¾ lb.....	1 lb.
Cocoa.....	½ lb.....	¾ lb.....	1 lb.
Baking powder, salt, etc.....	As needed	As needed	As needed

<i>Average cost per week²</i>	\$5 to \$7	\$7.50 to \$10	\$10 to \$13
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Cod-liver oil (for 1 child)..... 3 to 4 ozs. 3 to 4 ozs. 3 to 4 ozs.

<i>Average cost, including cod-liver oil for 1 child.....</i>	\$5.15 to \$7.25	\$7.65 to \$10.25	\$10.15 to \$13.25
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¹ Where potatoes or sweetpotatoes can not be had use more vegetables and 2 to 4 extra pounds of flour or meal.

² Based on recent prices obtained by the U. S. Bureau of Home Economics from many sections of the country.

WHEN EMERGENCY MEASURES ARE NECESSARY

The basis for all food relief should be an allowance that will provide an adequate diet. But just now many communities are finding it difficult to provide sufficient relief funds to meet adequately the present widespread emergency. If, temporarily, relief funds can not be obtained that are sufficient to provide such adequate diets, *at least* enough money must be allowed to provide the "irreducible amounts" of the protective and other foods. Protection of the health and growth of children must receive first consideration.

The following "irreducible amounts" of the protective and other foods are far from optimal and are not adequate for use over a long period of time. They must *not* be taken as a basis for estimating food needs, but merely as the quantities below which no diet should ever fall. Continuous effort should be made to increase the amounts of the protective foods.

Protective foods:

Milk.....	At least 1 pint daily for every child and every pregnant or nursing mother. At least ½ pint daily for each other adult.
Cod-liver oil.	At least 2 teaspoonfuls daily for every child under 2 and for every child who is not well nourished.
Vegetables.....	At least one vegetable daily (preferably two) for all the family.

Other foods:

Bread, cereals, and legumes.	4 to 5 pounds of bread or cereals per person weekly. From ¼ to ½ pound of dried beans or peas a week for each person.
Fats and sugars. .	From ¾ to 1 pound of fat per person a week. Use butter, margarine, lard, salt pork, vegetable oils. From ½ to 1 pound of some form of sugar a week for each person. Use cane molasses, sorgo sirups (sorghum), corn sirup, or sugar.

Eggs, cheese, meat or fish. These foods are expensive and may be reduced to very small amounts when the money for food is limited. If eggs are cheap, as in some communities, they should be included in the diets, especially for children.

Accessory articles Salt, baking powder, tea, coffee, and cocoa should be allowed for in small amounts.

Under emergency conditions, then, for families of three, five, and seven, with children, *at least* the following amounts of the protective foods and of breadstuffs and legumes must be used weekly if health and growth are not to be damaged seriously. These quantities are *not* adequate for long-time use.

Milk:	Three in family	Five in family	Seven in family
Half fresh, half evaporated	7 quarts...	14 quarts...	21 quarts...

Vegetables:

Tomatoes, No. 2 cans	2 cans	3 cans	4 cans.
Cabbage or kale	3 lbs	5 lbs	7 lbs.
Potatoes	6 lbs	10 lbs	15 lbs.
Other vegetables (carrots, onions, turnips, etc.)	4 lbs	8 lbs	12 lbs.

Bread, cereals, and legumes:

Bread (part whole wheat)	8 lbs	10 lbs	12 lbs.
Cereals (oatmeal, wheat cereal, rice, macaroni)	1½ lbs	3 lbs	4 lbs.
Flour, corn meal, hominy	4 lbs	5 lbs	7 lbs.
Dried peas and beans (cheapest bulk variety)	1½ lbs	3 lbs	4 lbs.

To these must be added, as recommended on page 7, fats and sugars, cod-liver oil if there is a child under 2, and, in small amounts, the accessory articles mentioned.

As in the case of the adequate diet, the cost of a food supply based on the irreducible quantities of protective and other foods will vary with the size of family, with local market prices, with the skill used in selecting and preparing the cheapest form of each food, and with the family's own resources in dairy, garden, or other produce. It may be emphasized that only by carefully apportioning food expenditures, by limiting the variety of foods, and by buying each food in its cheapest form will the amounts of money available bring the best returns in food value. In order to use each dollar available to the best advantage it should be divided approximately according to the following plan:

OUT OF EVERY DOLLAR SPEND—

25 cents (one-fourth) for	Milk.
20 cents (one-fifth) for	Vegetables.
20 cents (one-fifth) for	Bread, cereals, and legumes.
20 cents (one-fifth) for	Fats and sugars.
15 cents (the rest) for	Eggs, cheese, meat or fish, and accessory articles.

Under Conditions of Extreme Economic Distress

In the most extreme situations of economic distress the need for relief may be so widespread as to resemble conditions following disaster. If the allowance for food

falls below that which will supply even the irreducible amounts of protective and other foods, there will be great danger of serious injury to children and adults. When the food allowance is extremely low, the food that unsupervised and unaided families will provide for themselves may be extraordinarily poor. It may consist only of such foods as salt pork, meal, and molasses, or even of rice and beans. Every effort should be made to supplement such food with as large quantities of the protective foods as can be furnished.

When diets such as these are all the food that is available, the need for milk, cod-liver oil, and vegetables is, of course, especially great. Though 1 pint daily is the minimum below which no child's allowance for milk should be allowed to fall, it may be emphasized that to supply one cup of milk is better than to permit a child to go without any. This first cup, however, must be regarded only as a starting point. To it must be added a second cup as soon as possible, and again a third, if growth is to be provided for at all adequately. Canned tomatoes, raw cabbage, greens, or even potatoes if they are the only vegetable to be had, should be made available to all families several times a week. In these emergency conditions cod-liver oil may well be given to all children. In addition, cereals, flour, and dried beans and peas should be made available to provide for energy needs.

Under such conditions, wholesale buying of milk and other necessary articles of diet may be advisable to permit the individual families to obtain food at the lowest possible cost. Clean whole wheat or crushed wheat, locally prepared, may be cooked in large quantities and distributed by a central agency. Dry skim milk may be purchased by the barrel. If skim milk is the chief form of milk used, butter or cod-liver oil must be included in the diet.

SUGGESTIONS FOR AGENCIES ENGAGED IN PLANNING EMERGENCY FOOD RELIEF

1. Irregular, unplanned, or uncoordinated food relief given to a family by several agencies is undesirable, since it is often impossible to know whether the various allowances together meet the family's need.⁴

⁴See Outline of Procedure in Home and Work Relief in Unemployment Emergencies, a manual published by the Family Welfare Association of America, 130 East 22d Street, New York, 1931. See also Suggestions for Dealing with Unemployment Emergencies in Smaller Communities, published by the American Association of Public Welfare Officials, 1800 E Street NW., Washington, 1931.

2. Make every effort to see that each family has a food allowance sufficiently large to provide an adequate diet at minimum cost, according to local prices. See that each family learns how to divide its food money so that the "protective foods"—milk, vegetables or fruit, and cod-liver oil—will be purchased in correct proportion to breadstuffs, fats, sugars, and other foods.⁵

3. Since cod-liver oil is to be included in the food budgets only for families with children under 2 or children who are not well nourished, and since, like milk, it seems to many persons one of the more expensive articles of diet, some communities may find it helpful to call on local groups to deal with this special problem. The money for cod-liver oil preferably should be added to the family budget. In order to obtain cod-liver oil at the lowest possible cost, families should be provided with enough money to purchase it in large quantities, usually in pint bottles. If it is bought at wholesale an even greater saving may be made.

So, too, special groups may be organized to deal with the problem of milk for children. Whenever possible the money for milk should be included in the family food allowance. However, in times of great stress, wholesale purchase of milk (either fresh or evaporated—not sweetened condensed) will reduce the cost and thus make more milk available for children.

4. Families may need help in learning to use and prepare unfamiliar foods to the best advantage and to adapt them to personal and national customs. Call upon local teachers of home economics, public-health nurses, dietitians, and nutritionists to assist them. Advice on food problems and printed information about foods and their preparation may be obtained from the county home-demonstration agent, the extension service of the State agricultural college, the nutrition service of the American National Red Cross, and the Bureau of Home Economics of the United States Department of Agriculture.

⁵ See *Getting the Most for Your Food Money*, a 4-page leaflet published by the Bureau of Home Economics and the Office of Cooperative Extension Work, U. S. Department of Agriculture, Washington, 1931. See also *How to Spend Your Food Money*, a 1-page dodger published by the Children's Bureau, U. S. Department of Labor, and the Bureau of Home Economics, U. S. Department of Agriculture, Washington, 1931.

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